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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/645,870	08/22/2003	Tetsuya Uda	62807-137	8647
20277	7590	04/19/2005	EXAMINER	
MCDERMOTT WILL & EMERY LLP 600 13TH STREET, N.W. WASHINGTON, DC 20005-3096			ROJAS, OMAR R	
			ART UNIT	PAPER NUMBER
			2874	

DATE MAILED: 04/19/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/645,870

Applicant(s)

UDA, TETSUYA

Examiner

Omar Rojas

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 December 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on August 22, 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>0803</u> . | 6) <input checked="" type="checkbox"/> Other: <u>Detailed Action</u> . |

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Information Disclosure Statement

2. The prior art documents submitted by applicant in the Information Disclosure Statement(s) filed on August 22, 2003 have all been considered and made of record (note the attached copy of form(s) PTO-1449).

Specification

3. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Claim Objections

4. Claim 12 is objected to because of the following informalities: Claim 12 recites the limitation "said light is received as defined above." This limitation is considered vague and ambiguous since it is unclear whether "as defined above" refers to the preamble of the claim or to the first method step. Appropriate correction is required.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

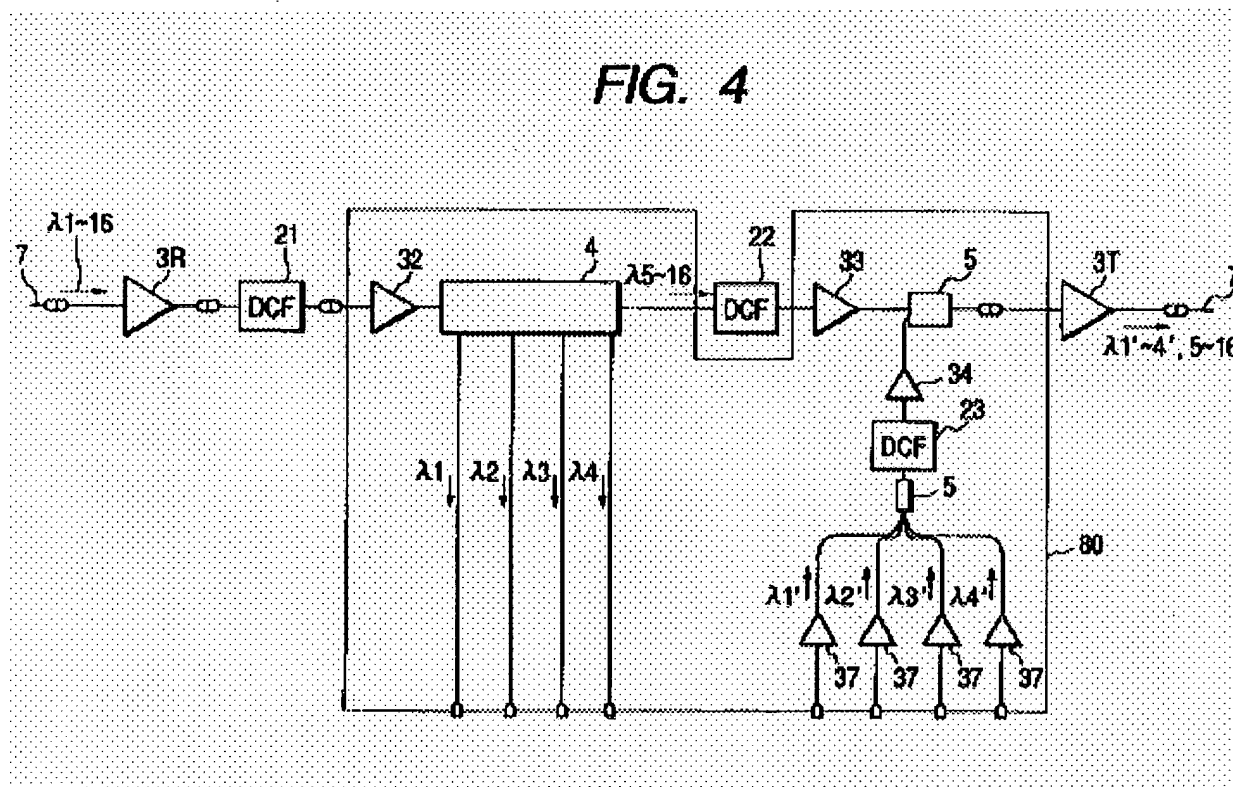
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6. Claims 1, 4, 5, and 12 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Patent Publication 2001/0024544 to Matsuoka et al. (hereinafter “Matsuoka”).

Matsuoka discloses in Figure 4 (reproduced below) an optical transmission apparatus for amplifying wavelength-division multiplexed light received from a first optical transmission line and supplying it to a second optical transmission line, comprising:

- an optical amplifier (**3R, 3T**) for amplifying said wavelength-division multiplexed light;
- a first chromatic dispersion compensator **21** for compensating for chromatic dispersion caused during the transmission of said wavelength-division multiplexed light from a first predetermined position on said first optical transmission line to said optical transmission apparatus;

- and a second chromatic dispersion compensator (**22, 23**) for compensating for chromatic dispersion caused during the transmission of said wavelength-division multiplexed light between said optical transmission apparatus and a second predetermined position on said second optical transmission line.



Regarding claim 4, said optical amplifier includes a first optical amplifier **3R** provided between said first optical transmission line and said first chromatic dispersion compensator **21**, and a second optical amplifier **3T** provided between said second chromatic dispersion compensator **22** and said second optical transmission line.

Regarding claim 5, Matsuoka further teaches an add-drop portion **80**.

Regarding claim 12, see the previous remarks and paragraphs [0036]-[0041].

7. Claims 1-5 and 12 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Patent No. 5,943,151 to Grasso et al. (hereinafter "Grasso").

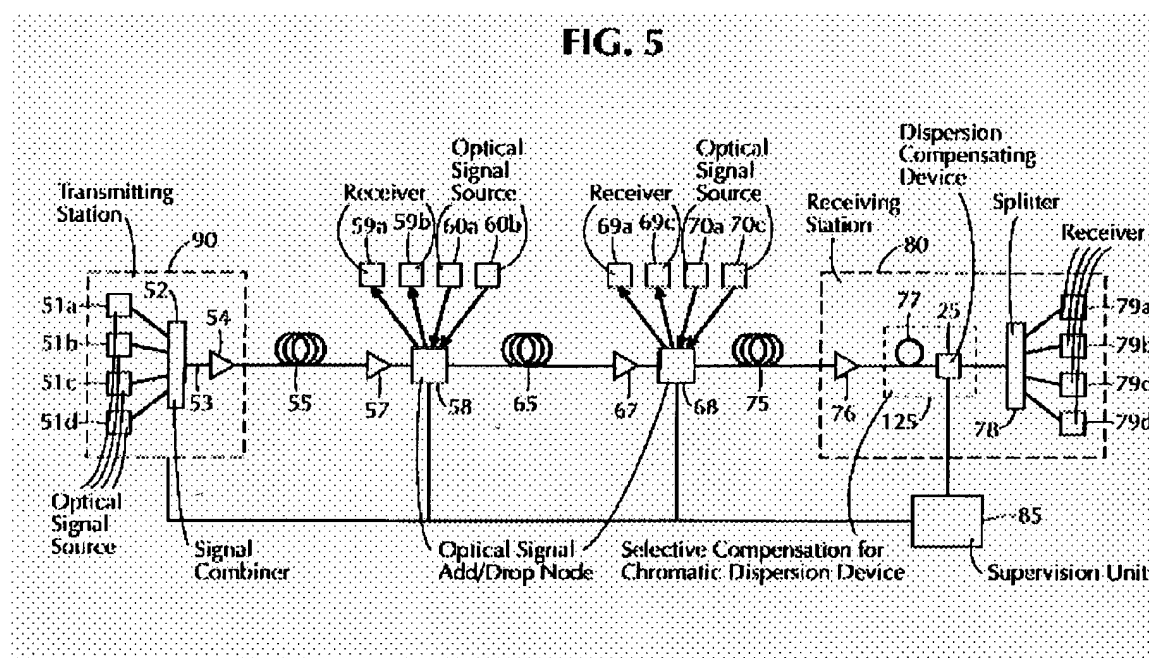
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Regarding claim 1, Grasso shows in Figure 5 (reproduced below) an optical transmission apparatus for amplifying wavelength-division multiplexed light received from a first optical transmission line and supplying it to a second optical transmission line, comprising:

an optical amplifier **57** for amplifying said wavelength-division multiplexed light;

a first chromatic dispersion compensator (see **Figure 6 and column 16, lines 47-55**) for compensating for chromatic dispersion caused during the transmission of said wavelength-division multiplexed light from a first predetermined position on said first optical transmission line to said optical transmission apparatus;

and a second chromatic dispersion compensator (see **Figure 6 and column 16, lines 47-55**) for compensating for chromatic dispersion caused during the transmission of said wavelength-division multiplexed light between said optical transmission apparatus and a second predetermined position on said second optical transmission line.



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Regarding claim 2, Grasso shows an add drop portion **58** between said first and second chromatic dispersion compensators, said add drop portion **58** having wavelength-dropping means for dropping an optical signal of a predetermined band from said wavelength-division multiplexed light, and wavelength-adding means for multiplexing an optical signal of a certain band with said wavelength-division multiplexed light.

Regarding claim 3, see Grasso at Figure 2 and column 15, lines 45-51. The add drop portion **58** of Grasso is implicitly detachable.

Regarding claim 4, said optical amplifier includes a first optical amplifier **57** provided between said first optical transmission line and said first chromatic dispersion compensator, and a second optical amplifier **67** provided between said second chromatic dispersion compensator and said second optical transmission line.

Regarding claim 5, see the previous remarks.

Regarding claim 12, see the previous remarks and columns 15-16.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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9. **Claims 6-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Matsuoka as applied to claim 5 above, and further in view of Patent Publication No. 2002/0105695 to DeGrange, Jr. et al. (hereinafter "DeGrange").**

Matsuoka does not teach gain-tilt compensation as described by claims 6-11.

DeGrange, however, teaches the missing limitations of claims 6-11. DeGrange shows a gain tilt compensator in his Figure 1 that can compensate for gain-tilt in an optical add-drop module 30 using a supervisory signal channel (see [0075]-[0076]), pre-stored data (see [0053]-[0055]), and various optical power measurements taking at various locations (see [0051]-[0052]). The compensator of DeGrange also compensates for gain-tilt in an optical amplifier 60 (see [0081])

The ordinary skilled artisan would have been motivated to combine DeGrange with Matsuoka in order to achieve improved optical power balancing. See DeGrange at the Abstract.

Therefore, claims 6-11 are unpatentable in view of Matsuoka combined with DeGrange.

10. **Claims 6-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Grasso as applied to claim 5 above, and further in view of DeGrange.**

Grasso does not teach gain-tilt compensation as described by claims 6-11.

DeGrange, however, teaches the missing limitations of claims 6-11. DeGrange shows a gain tilt compensator in his Figure 1 that can compensate for gain-tilt in an optical add-drop module 30 using a supervisory signal channel (see [0075]-[0076]), pre-stored data (see [0053]-[0055]), and various optical power measurements taking at various locations (see [0051]-[0052]). The compensator of DeGrange also compensates for gain-tilt in an optical amplifier 60 (see [0081])

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The ordinary skilled artisan would have been motivated to combine DeGrange with Grasso in order to achieve improved optical power balancing. See DeGrange at the Abstract.

Therefore, claims 6-11 are unpatentable in view of Grasso combined with DeGrange.

Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Patent Publication 2003/0198473 also teaches dispersion compensation for add-drop multiplexing.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Omar Rojas whose telephone number is (571) 272-2357. The examiner can normally be reached on Monday-Friday (7:00AM-3:00PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rod Bovernick, can be reached on (571) 272-2344. The official facsimile number for regular and After Final communications is (703) 872-9306. The examiner's RightFAX number is (571) 273-2357.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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A handwritten signature in black ink, appearing to read "Omar Rojas".

Omar Rojas
Patent Examiner
Art Unit 2874

or
April 18, 2005